

Lavalley Lumber Company, LLC
York County
Sanford, Maine
A-24-71-M-R

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**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Lavalley Lumber Company, LLC (Lavalley) of Sanford, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their Sanford, Maine wood products facility.

B. Emission Equipment

Lavalley is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Fuel Type, %Sulfur</u>	<u>Maximum Firing Rate</u>	<u>Date of Manufacture</u>	<u>Stack #</u>
Boiler #1	33.5	Wood waste, na	3.7 ton/hr	1980	#1
Boiler #2	14.6	#6 oil, 0.5%	97.5 gal/hr	1973	#2

Electrical Generation Equipment

<u>Equipment</u>	<u>Power Output (kW)</u>	<u>Fuel Type, % sulfur</u>	<u>Firing Rate (gal/hr)</u>
Diesel Generator	350	Diesel, 0.05%	24.4

Process Equipment

<u>Equipment</u>	<u>Power Output (HP)</u>	<u>Fuel Type, % sulfur</u>	<u>Firing Rate (gal/hr)</u>
Whole Tree Chipper	650	Diesel, 0.05%	32.6

C. Application Classification

The application for Lavalley Lumber Company, LLC of Sanford, Maine does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Facility Description

Lavalley is a lumber and building materials manufacturing facility located in Sanford, Maine. Emission sources at the facility include: a wood-fired boiler and associated fuel handling equipment, wood sawing and milling machines, an oil fired boiler and associated equipment, a diesel generator and a diesel powered whole tree chipper.

C. Boiler #1

Lavalley operates Boiler #1 to satisfy heating and hot water needs for their wood product manufacturing facility. Boiler #1 is a dutch oven style boiler with a design heat input capacity of 33.5 MMBtu/hr firing wood waste and a maximum design steam flow rate of 27,000 pounds of saturated steam at 175 psia per hour. Boiler #1 is equipped with two multicyclone mechanical dust separators for particulate control. Boiler #1 was manufactured in 1980 and is therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units applicable to boilers with a heat input of greater than 10 MMBtu/hr and manufactured after June 9, 1989).

Lavalley is limited to firing no more than 29,000 tons of 50% moisture wood fuel or equivalent per year based on a twelve-month rolling total in Boiler #1. In order to demonstrate compliance with the wood fuel use restriction for Boiler #1, Lavalley shall maintain a wood fuel use log indicating the twelve-month rolling total wood fuel use in Boiler #1.

A summary of the BPT analysis for Boiler #1 (33.5 MMBtu/hr) is as follows:

1. PM/PM₁₀ emission limits are based upon MEDEP Chapter 103.
2. SO₂, NO_x, CO and VOC emission limits are based upon AP-42 data dated 7/01 for wood combustion.
3. Visible emissions from stack #1 shall not exceed 30% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period.

D. Fuel Handling

Lavalley utilizes a pneumatic blower system to transfer waste wood from the wood processing areas to a dust cyclone, designated Cyclone #1, which drops the wood waste onto a drag chain conveyor to be dumped into the Boiler #1 fuel bin. Waste wood is then pulled out of the fuel bin by conveyor to Boiler #1 as fuel. Lavalley also utilizes an outside fuel shed for fuel storage. Wood fuel is loaded and unloaded into and out of the fuel shed by bucket loader.

In accordance with Chapter 101, Section 2(B)(3)(d) of the Department's regulations, general process emissions from the waste wood handling system which includes the waste wood blower system and conveyor system, the dust cyclone (Cyclone #1) and the waste wood fuel bin and shed, shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period.

Lavalley shall establish a system of maintenance, inspection and repair for the waste wood handling system, which shall allow for a monthly inspection of the system and Lavalley shall document compliance by means of a maintenance, inspection and repair log.

E. Boiler #2

Lavalley also operates Boiler #2 to satisfy heating and hot water needs for their wood product manufacturing facility. Boiler #2 is a Clever Brooks manufactured boiler with a design heat input capacity of 14.6 MMBtu/hr firing #6 fuel oil with a sulfur content of no greater than 0.5% sulfur by weight.

Boiler #2 was manufactured in 1973 and is therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units applicable to boilers with a heat input of greater than 10 MMBtu/hr and manufactured after June 9, 1989).

Lavalley is limited to firing no more than 450,000 gallons of #6 fuel oil with a sulfur content of no greater than 0.5% sulfur by weight in Boiler #2. In order to demonstrate compliance with the fuel oil use restriction for Boiler #2, Lavalley shall maintain a fuel oil use log indicating the twelve-month rolling total fuel oil use in Boiler #2 and including supplier certification indicating the sulfur content of the fuel.

A summary of the BPT analysis for Boiler #2 (14.6 MMBtu/hr) is as follows:

1. PM/PM₁₀ emission limits are based upon MEDEP Chapter 103.
2. SO₂, NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96 for oil combustion.
3. Visible emissions from stack #2 shall not exceed 20% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period.

F. Diesel Generator

Lavalley utilizes a 350 kW diesel generator set to satisfy back-up and emergency power for the facility. As previously licensed, the diesel generator shall meet BPT through the firing of no greater than 25,000 gallons of diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight. Emissions calculations for the diesel generator were based on AP-42 factors dated 10/96.

In order to demonstrate compliance with the fuel oil use restriction for the diesel generator, Lavalley shall maintain a fuel oil use log indicating the twelve-month rolling total fuel oil use in the diesel generator and including supplier certification indicating the diesel fuel oil sulfur content.

In accordance with Chapter 101, Section 2(B)(1)(f) of the Department's regulations, visible emissions from the diesel generator set shall not exceed an opacity of 30% on a 6-minute block average basis, except for no more than two 6-minute block averages in a 3-hour period.

G. Whole Tree Chipper

Lavalley utilizes a whole tree chipper powered by a diesel engine rated at 650 horsepower. As previously licensed, the whole tree chipper engine shall meet BPT through the firing of no greater than 20,500 gallons of diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight. Emissions calculations for the whole tree chipper diesel unit are based on AP-42 factors dated 10/96.

In order to demonstrate compliance with the fuel oil use restriction for the whole tree chipper engine, Lavalley shall maintain a fuel oil use log indicating the twelve-month rolling total fuel oil use in the whole tree chipper engine and including supplier certification indicating the #2 fuel oil sulfur content.

In accordance with Chapter 101, Section 2(B)(1)(f) of the Department's regulations, visible emissions from the whole tree chipper engine exhaust unit shall not exceed an opacity of 30% on a 6-minute block average basis, except for no more than two 6-minute block averages in a 3-hour period.

In accordance with Chapter 101, Section 2(B)(3)(d) of the Department's regulations, general process emissions from the wood chipping process shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period.

H. Wood Drying Kilns

Lavalley makes use of 6 wood drying kilns to dry lumber produced at their facility. Lavalley utilizes four box kilns with volumes of 60,000 boardfeet (BF) each and two box kilns with volumes of 30,000 BF each. Annual throughput for the Lavalley wood drying kilns is approximately 15.0 million boardfeet (MMBF) per year. Lavalley predominantly dries Eastern White Pine. Using the emission factor of 2.26 pounds of VOC per 1000 board feet for white pine and the current annual drying production from the Lavalley kilns of 15.0 MMBF per year, Lavalley emits approximately 2.8 tons of VOC per year from the kiln drying process.

To allow for production flexibility, Lavalley shall be restricted to 25.0 tons of VOC emissions per year from kiln drying operations based on a twelve-month rolling total. To demonstrate compliance, Lavalley shall maintain a record of wood drying, which shall include the quantity of wood dried in the kilns indicating species and drying dates and VOC emissions calculations based on the amount of wood dried and the emission factor of 2.26 pounds of VOC per 1000 BF of eastern white pine as indicated below.

Annual VOC emissions (in tons) = Boardfeet of eastern white pine dried x 2.26 pounds /
1000 BF of eastern white pine / 2000 lbs per ton

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The wood drying record shall be maintained on a monthly as well as a twelve-month rolling total.

- I. Visible emissions from potential sources of fugitive particulate matter emissions, including material stockpiles and unpaved roadways, shall not exceed an opacity of 20%, except for no more than 5-minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20% in any 1-hour.

J. Annual Emission Restrictions

Lavalley shall be assessed fees based on the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	61.6
PM ₁₀	61.6
SO ₂	21.1
NO _x	92.0
CO	82.3
VOC	28.8

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source and modeling and monitoring are not required for a renewal.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-24-71-M-R subject to the following conditions:

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STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.

- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

- (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

- (16) Boiler #1
- A. Lavalley is limited to firing no more than 29,000 tons of wood fuel per year in Boiler #1 based on a twelve-month rolling total. Lavalley shall maintain fuel use records on a monthly and twelve-month rolling total basis. [MEDEP Chapter 115, BPT]

B. Boiler #1 shall not exceed the following emission limits:

Equipment		PM	PM₁₀	SO₂	NO_x	CO	VOC
Boiler #1	lb/MMBtu	0.44	-	-	-	-	-
	lb/hr	14.7	14.7	0.8	16.4	20.1	1.3

[MEDEP Chapter 103 and 115, BPT]

C. Visible emissions from stack #1 shall not exceed 30% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period. [MEDEP Chapter 101]

(17) **Fuel Handling**

A. Visible emissions from the waste wood handling system which includes the waste wood blower system and conveyor system, the dust cyclone (Cyclone #1) and the waste wood fuel bin and shed, shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period.[MEDEP Chapter 101]

B. Lavalley shall establish a system of maintenance, inspection and repair for the waste wood handling system, which shall allow for a monthly inspection of the system. [MEDEP Chapter 115, BPT]

C. Lavalley shall document compliance by means of a maintenance, inspection and repair log. Lavalley shall inspect operations of the wood chip and wood dust handling system, once per month and record findings in the maintenance, inspection and repair log. [MEDEP Chapter 115, BPT]

(18) **Boiler #2**

A. Lavalley is limited to firing no more than 450,000 gallons of #6 fuel oil with a sulfur content of no greater than 0.5% sulfur by weight in Boiler #2.

B. In order to demonstrate compliance with the fuel oil use restriction for Boiler #2, Lavalley shall maintain a fuel oil use log indicating the twelve-month rolling total fuel oil use in Boiler #2 and including supplier certification indicating the #6 fuel oil sulfur content. [MEDEP Chapter 115, BPT]

C. Boiler #2 shall not exceed the following emission limits:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	1.8	1.8	7.6	7.3	0.5	0.1

[MEDEP Chapter 103 and 115, BPT]

D. Visible emissions from stack #1 shall not exceed 20% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period. [MEDEP Chapter 101]

(19) Ash from Boiler #1 and #2 shall be disposed of in accordance with the Bureau of Remediation and Waste Management (BRWM). Ash shall be sufficiently conditioned with water or transported in sealed containers so as to prevent fugitive emissions.

(20) Diesel Generator

A. The diesel generator shall be limited to firing no greater than 25,000 gallons per year of diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight based on a twelve-month rolling total. [MEDEP Chapter 115, BPT]

B. In order to demonstrate compliance with the fuel oil use restriction for the diesel generator, Lavalley shall maintain a fuel oil use log indicating the twelve-month rolling total fuel oil use in the diesel generator and including supplier certification indicating the diesel fuel oil sulfur content. [MEDEP Chapter 115, BPT]

C. The diesel generator shall not exceed the following emission limits:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.4	0.4	0.2	15.1	3.2	1.2

[MEDEP Chapter 103 and 115, BPT]

D. Visible emissions from the diesel generator set shall not exceed an opacity of 30% on a 6-minute block average basis, except for no more than two 6-minute block averages in a 3-hour period. [MEDEP Chapter 101]

(21) Whole Tree Chipper

- A. The whole tree chipper engine shall be limited to firing no greater than 20,500 gallons per year of diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight based on a twelve-month rolling total. [MEDEP Chapter 115, BPT]
- B. In order to demonstrate compliance with the fuel oil use restriction for the whole tree chipper engine, Lavalley shall maintain a fuel oil use log indicating the twelve-month rolling total fuel oil use in the whole tree chipper engine and including supplier certification indicating the #2 fuel oil sulfur content. [MEDEP Chapter 115, BPT]
- C. The whole tree chipper engine shall not exceed the following emission limits:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
	lb/MMBtu	0.12	-	-	-	-	-
Boiler #2	lb/hr	0.5	0.5	0.2	14.6	3.9	1.6

[MEDEP Chapter 103 and 115, BPT]

- D. Visible emissions from the whole tree chipper engine shall not exceed an opacity of 30% on a 6-minute block average basis, except for no more than two 6-minute block averages in a 3-hour period. [MEDEP Chapter 101]

(22) Wood Drying Kilns

- A. Lavalley shall be restricted to a VOC emissions limit of 15.0 tons of VOC emissions per year from kiln drying operations based on a twelve-month rolling total. [MEDEP Chapter 115, BPT]
- B. To demonstrate compliance, Lavalley shall maintain a record of wood drying. The record shall include the quantity of wood dried in the kilns indicating drying dates and VOC emissions calculations based on the amount of wood dried and the emission factor of 2.26 pounds of VOC per 1000 BF. The VOC emissions record shall be maintained on a monthly and a 12-month rolling total basis. [MEDEP Chapter 115, BPT]

(23) Fugitive Emissions

Visible emissions from fugitive emission sources shall not exceed an opacity of 20%, except for no more than 5-minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any 1-hour. [MEDEP Chapter 101]

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- (24) Lavalley shall notify the Department within 48-hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).
- (25) Lavalley shall pay the annual air emission license fee within 30 days of March 31 of each year. Pursuant to 38 MRSA 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for the revocation of the license under 38 MRSA 341-D, Subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

The term of this Order shall be for five (5) years from the signature above.

Date of initial receipt of application: **January 21, 2004**

Date of application acceptance: **January 28, 2004**

Date filed with the Board of Environmental Protection: _____

This Order prepared by, Peter G. Carleton, Bureau of Air Quality